



What is ADC-Alternative Daily Cover?

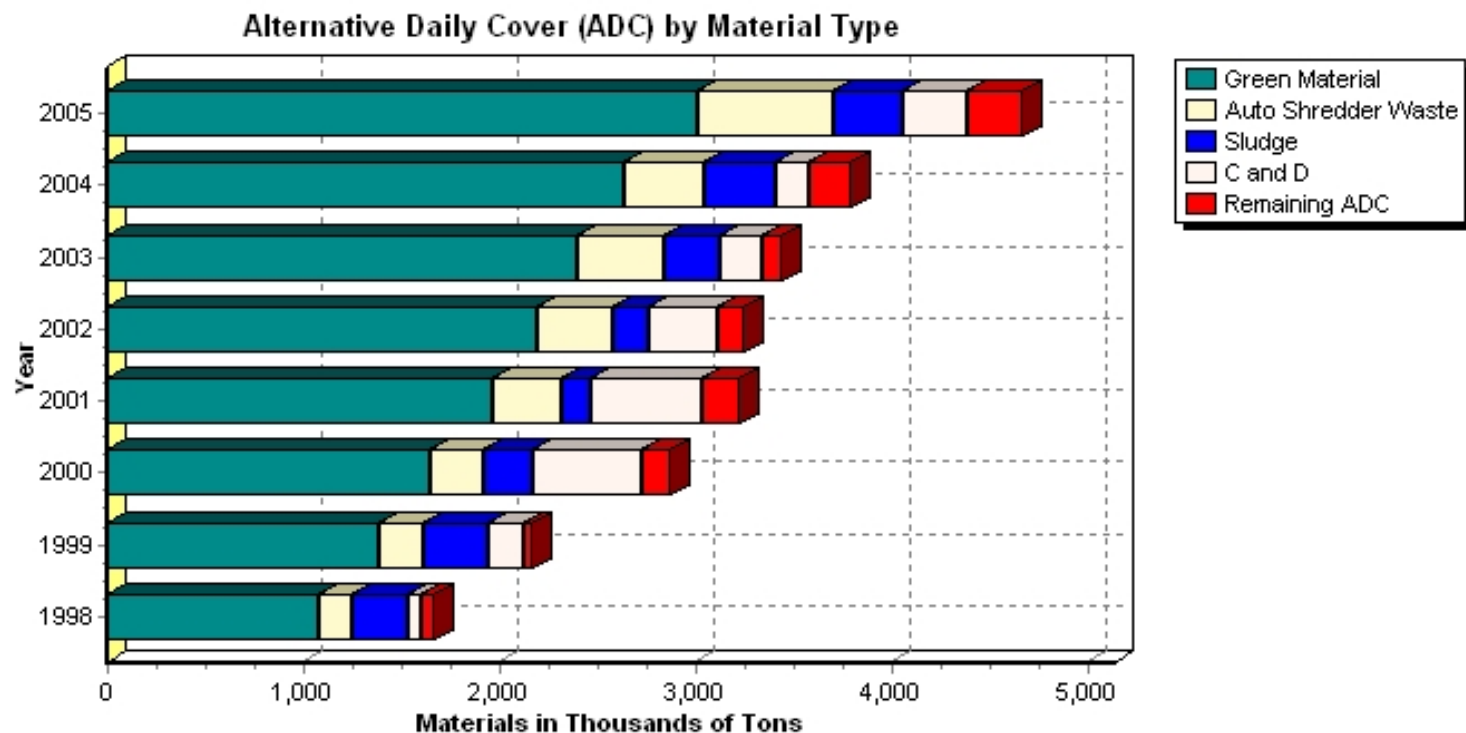
- Board-approved materials other than soil used at a landfill on all surfaces of the fill where solid waste will be deposited within 180 days.
- Generally, these materials must be processed so that they do not allow gaps in the face surface, which would provide breeding grounds for insects and vermin.

Latest Figures of ADC Use

Total statewide ADC numbers
1999 through 2005:

1999 = 2,172,805 tons	2003 = 3,447,296 tons
2000 = 2,880,198 tons	2004 = 3,798,373 tons
2001 = 3,231,024 tons	2005 = 4,612,132 tons
2002 = 3,244,353 tons	

ADC by Material Type



Current State of ADC Use

- Total tonnage has triple since 1998!
- More than 60% of the LF's in CA use ADC of some kind – the most popular and least expensive are tarps.
- Tarps are not recorded because no diverted materials are involved.

Which ADCs are approved?

- So what is everybody using out there for ADC?





C & D



Other ADCs also in use:









Why Use ADC at All?

The benefits of using ADC at landfills are:

- Reduces the need for on-site soil or soil importation for cover material
- A good place for otherwise unwanted materials such as sludge, auto-shredder waste, shredded tires, and C & D materials
- As 'beneficial reuse', waste materials such as concrete or used asphalt can be used for road base, erosion control or other uses within the landfill
- Counts as diversion as determined by the legislature

Changes to the ADC Regs – Pre-processing & Material Grain Size

- ADC Regulations are found in Title 27 § 20690
- Green Material used as ADC – must now be 95% <6 inches long
- Construction/Demolition ADC – must be 95% <12 inch long; 50% <6 inch when C&D is used as ADC
- Materials must be processed before being spread on the working face
- Site-specific alternative processing & grain size specifications are allowed if approved by LEA with concurrence of CIWMB

Why make a grain size requirement/specification?

- Field studies and inspections have shown that in many landfills using waste derived ADC without pre-processing, notably C/D wastes in particular, the result can be undesirable as cover.
- A lot of ADC can be marginal in appearance and function, contains contaminants, especially plastic, and can be a compliance problem in the field.



Why 6 inches and 12 inches as the required specifications?

- The 6 inch figure for the green waste reflects the standard for ground GWM that can be achieved with most existing grinding machines and would not impose major new costs to operators wishing to comply.
- The 12 inch figure for C/D waste also reflects a reasonable number provided by operators who were successful in grinding C/D waste for use as ADC. Most particles are under 6 inches but there are often going to be pieces in the 12 inch range or longer.

Why 6 inches and 12 inches as the required specifications?

- These numbers are a result of a study done by the LA Sanitation Districts in 2002 using existing equipment the operator already had. The idea was to see if the available machinery was already turning out a spec that would be acceptable for use within the ADC regulations.

GWM and C/D used as ADC – Operational Changes Pre-processing Now Required

§ 20690 (a) (2) Waste-derived alternative daily cover shall be processed prior to spreading and compacting on the working face and applied and compacted to ensure no open voids within the material or in contact within the underlying wastes.







No Cross-Contamination of ADC Waste or other ADC Materials

§ 20690 (a)(11) “The owner or operator shall implement a program described in the Report of Disposal Site Information as required by §21600(b)(6) to minimize contamination of alternative daily cover with wastes not included within the individual alternative daily cover material types specified in subdivision (b) of this section and wastes that would conflict with the performance requirements of ¶(a)(2). ”







No Blending or Layering of Different ADCs

§ 20690 (b) “Unless otherwise specified in this section, alternative daily cover use by blending listed materials other than using side-by-side on the working face, or layering on top of one another listed materials, shall require site-specific demonstration projects approved by the EA with concurrence by the CIWMB as required by subsection (a)(1).”



New Processing Requirement for Green Waste – Spec Size

§20690 (b)(3)(B) Green material used for ADC shall be processed prior to being applied to the working face. Prior to spreading and compacting on the working face, processed green material shall comply with a grain size specification by volume of 95% less than 6 inches.







Green Waste ADC – Specifications/Grain Size

§20690 (b)(3)(B)

“...Alternative processing and alternative grain size specification requirements may be approved by the EA if the EA determines that the alternative meets the performance requirements of [§20690] (a)(2) and (a)(3) of this section and the CIWMB concurs.”

Sludge Depth Used as ADC Must be Reduced

§20690 (b)(4)(C) “Sludge or sludge-derived materials shall be restricted to a minimum compacted thickness of 6 inches and average compacted thickness of less than or equal to 12 inches.” (as opposed to 18” in previous regs)

C/D Processing Requirements

§20690 (b)(9)(A) “Processed construction and demolition wastes and materials shall be ground, pulverized, shredded, screened, source separated, or otherwise processed, alone or mixed with soil in a manner to provide a compacted material free of open voids when applied to meet the performance requirements as alternative daily cover.”

Is this C&D ADC?



C&D ADC – Violation. No Pre-Processing.



C&D ADC - Compliance



C/D ADC Material Definitions

§20690 (b)(9)(B) “Processed construction and demolition wastes and materials used as alternative daily cover shall be restricted to the following materials: rock, concrete, brick, sand, soil, ceramics, cured asphalt, lumber and wood, wood products, roofing material, plastic pipe, plant material when commingled from construction work, and fines derived from processing the above materials.”

Test Compliance with the Particulator



C/D Spec Size Requirements

§20690 (b)(9)(C) “Construction and demolition wastes shall be processed prior to being applied to the working face. Prior to spreading and compacting on the working face, these materials shall comply with a grain size specification by volume of 95% less than 12 inches and 50% less than 6 inches...”

C&D ADC Alternative Processing/Grain Size - Allows for Flexibility as Determined by the LEA



Beneficial Reuse – What is it?

- Beneficial Reuse requirements are found in Title 27 §20686
- Beneficial reuse materials are waste derived products NOT used as ADC (daily cover) but used in other places around the landfill. Example: crushed concrete used for road base, building winter disposal pads, or used as gravel substitutes around gas and leachate collection systems.
- Materials used for ‘beneficial reuse’ are given credit for diversion and no disposal fees are due.



Beneficial Reuse - *Overuse*

- §20686 “Beneficial reuse shall be restricted to quantities of solid wastes no more than necessary to meet the minimum requirements...”

BOE Fees

§20686(b) “Should the CIWMB determine that an owner or operator violated this standard, the owner or operator shall revise the applicable reports to reflect the overuse as disposal, and pay the required Board of Equalization (BOE) disposal tipping fees for the amount of overuse.”

BOE Fees

- Who would enforce the provisions of this section?
- Would the LEA's be obligated to participate in the analysis of the records or would that be done only by the CIWMB and not be an LEA function?
- The answer is no – the LEAs will not need to pursue these obligations but would need to help enforce the numbers contained in the JTD or RDSI.

RDSI Requirements

Title 27 §21600 (b) (6) (B) Alternative Daily Cover and Beneficial Reuse - Describe alternative daily cover and beneficial reuse waste types, quantities, processing methods, alternative processing or grain size specifications if applicable, operations methods, and engineering, industry guidelines, or other standard practices to ensure compliance with §§20685 and 20690.

Questions/Answers